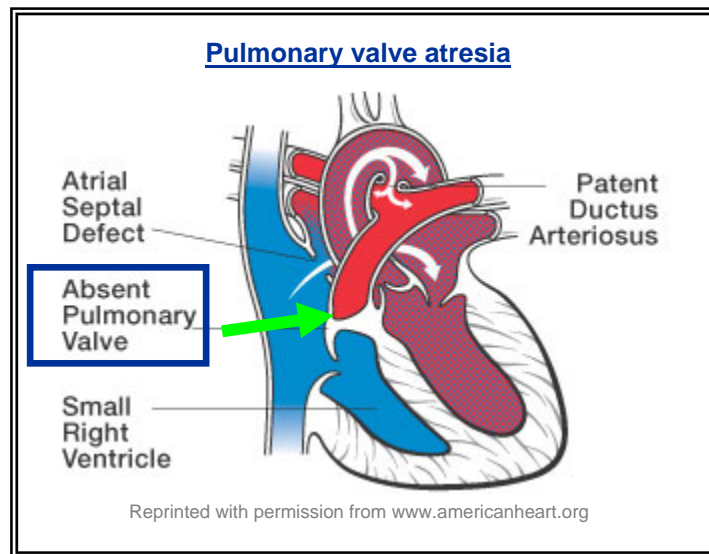# Pulmonary Valve Atresia

What is pulmonary valve atresia?

Pulmonary valve atresia occurs when the **pulmonary valve** (opening between the right ventricle and the pulmonary artery) is absent. As a result, blood can't flow from the **right ventricle** (lower chamber of the heart) into the **pulmonary artery** (blood vessel between the heart and lungs). The right ventricle and **tricuspid valve** (opening between the upper and lower chambers on the right side of the heart) may also be abnormal.

The only source of blood flow to the lungs is the **patent ductus arteriosus** (PDA, an opening between the pulmonary artery and the aorta). The blood that passes through the PDA is a mixture of oxygen-poor and oxygen-rich blood. If the PDA narrows or closes, blood flow to the lungs may be reduced to dangerously low levels, which can cause **cyanosis** (bluish tint to the skin due to decreased oxygen).

Pulmonary valve atresia

Atrial Septal Defect

Absent Pulmonary Valve

Small Right Ventricle

Patent Ductus Arteriosus

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What causes pulmonary atresia?

Currently, the exact cause of pulmonary atresia is not known. Heredity likely plays a role in the development of all heart defects, meaning that if someone had a congenital heart defect, he or she has an increased chance of having a child with a heart defect.

How is pulmonary atresia treated?

Children with pulmonary valve atresia are usually given medication shortly after birth to prevent the PDA from closing. Pulmonary valve atresia can usually be corrected with surgery. Your child's doctor(s) will discuss appropriate treatment options with you.

For more information

American Heart Association - http://www.americanheart.org/presenter.jhtml?identifier=11105
Cincinnati Children's Hospital Medical Center's Heart Center Encyclopedia –
http://www.cincinnatichildrens.org/health/heart-encyclopedia/default.htm
MedlinePlus - http://www.nlm.nih.gov/medlineplus/congenitalheartdefects.html
National Heart Lung and Blood Institute - http://www.nhlbi.nih.gov/health/dci/Diseases/chd/chd_what.html
                    Sources: Cincinnati Children's Hospital, American Heart Association